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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/544,254	08/23/2005	Mizuo Miyazaki	3190-081	1342

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KILYK & BOWERSOX, P.L.L.C.
400 HOLIDAY COURT
SUITE 102
WARRENTON, VA 20186

EXAMINER	
AUDET, MAURY A	

ART UNIT	PAPER NUMBER
1654	

MAIL DATE	DELIVERY MODE
03/20/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/544,254	MIYAZAKI ET AL.	
	Examiner	Art Unit	
	MAURY AUDET	1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/11/07*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 August 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/11/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Applicant's amendment and response of 1/11/08 is acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The rejection of claims 1-20 under 35 U.S.C. 103(a) as being unpatentable over Okamoto (Eur. J. Pharmacol., January 2002 (Applicant's earliest effective filing date is 2/5/03, 1 year, 1 month after); 435(2-3): 265-7 (abstract)) or Akahoshi (Drugs of the Future (2002), 27(8), 765-770 (abstract)), in view of Scharpe et al. (US 2002/0061839 A1) and Powers et al. (US 5,543,396; also cited in IDS of 04/23/04, P5), is maintained for the reasons of record. Applicant's argument has been considered but is not found persuasive. Applicant's primary argument is that the references either alone or in combination do not teach or suggest the specific routes of administration of "intravenous, oral, or percutaneous". However, and firstly, Applicant himself has not claimed the administration route by any narrow means. IV, oral, and sc, pretty much covers the standard breadth of primary administration routes: e.g. in to the bloodstream, into the lung for systemic absorption, or in the subcutaneous tissue for capillary absorption into the blood stream. Thus, Applicant has now claimed that the standard means of administration are contemplated for administration. The routine optimization of selecting any known route of administration would have been standard practice, depending on the desired results or intended

effect of the agent, even irrespective of any express teaching to the same within the references. Absent some unexpected result by any one or more of these routes of administration, which has not been shown. Rather, only argument, without evidence or description reliance, has been passed.

Applicant's other primary basis for argument, is that Powers et al. and Sharpe et al. do not teach the invention, because tissue remodeling does not encompass tissue adhesion. This is also not found persuasive, as a clear definition of "tissue remodeling" was not found to include or exclude tissue adhesion. Thus, under the broadest reasonable interpretation of the claims, tissue remodeling would inherently include some degree of tissue adhesion. And the use of these references for this teaching, in the combination applied, is still deemed proper. Namely, remodeling is very open ended, and naturally includes, until shown otherwise, the bringing together of cells/tissues, e.g. bearing some degree of adhesion to each other through one bond or another. Thus, the rejection is maintained for the reasons of record.

The rejections are repeated below for continuity of record:

Okamoto teach a pharmaceutical composition comprising protease inhibitors such as Suc-Val-Pro-Phe^{P}(Oph)$_2$, for treating tissue adhesion (entire document).

Akahoshi teach a pharmaceutical composition comprising protease inhibitors such as Suc-Val-Pro-Phe^{P}(Oph)$_2$, for treating tissue adhesion (entire document).

Scharpe et al. teach the use of serine protease inhibitors such as Suc-Val-Pro-Phe (para 69) in virtually any pharmaceutical admixture/formulation, such as liposomes (para 125).

Powers et al. is discussed above. Powers et al. teach a pharmaceutical composition in any form (inherently containing a diluent or excipient since can be in the form of e.g. tablet, aqueous or oily suspension, etc.) (col. 16, lines 23-40), comprising protease inhibitors such as Suc-Val-Pro-Phe^{p}(Oph)$_2$ (e.g. Example 17), described as the "best inhibitor for [serine proteases] chymotrypsin and chymotrysin-like enzymes" (col. 5, lines 40-44; col. 3, lines 50-53), which are involved in "tissue remodeling" [e.g. tissue adhesion formation] (col. 1, lines 41-43). However, Powers et al. does not expressly teach the use all protease inhibitors or protease inhibitors such as Suc-Val-Pro-Phe^{p}(Oph)$_2$ to reduce [tissue] adhesion formation (e.g. claim 1) or all the various forms of administration (e.g. claim 25-30, such as liposomes).

It would have been obvious to one of ordinary skill in the art at the time of the invention to put protease inhibitors such as Suc-Val-Pro-Phe^{p}(Oph)$_2$ in any formulation/admixtures (e.g. any "transmitter" such as any carrier molecule having high molecular weight such as hyaluronic acid, hydrogel, carboxymethylcellulose, dextran, cyclodextran; e.g. Applicant's claims 9, 12-18) in the composition of either Okamoto or Akahoshi, because Scharpe et al. advantageously teach that serine protease inhibitors may be put in composition with e.g. liposomes, etc. depending on the desired result/administration route; just as Powers et al. likewise discussed in terms of motivation for route/type of administration being left open to the skilled artisan and the desired effect when using protease inhibitors.

The rejection of claims 1-20 under 35 U.S.C. 103(a) as being unpatentable over Powers et al. (US 5,543,396; also cited in IDS of 04/23/04, P5) in view of Scharpe et al. (US 2002/0061839 A1) and Okamoto (Eur. J. Pharmacol., January 2002 (Applicant's earliest

effective filing date is 2/5/03, 1 year, 1 month after); 435(2-3): 265-7) or Akahoshi (Drugs of the Future (2002), 27(8), 765-770 (abstract)), is maintained for the reasons of record. Applicant's arguments have been considered but are not found persuasive, for the same reasons discussed above.

[Although the claims are to products, there are nevertheless intended use limitations therein to which the present rejection is made under 103, as well as to claim 7, as to the obviousness of selecting other known serine protease/chymase inhibitors for use in the present medicament product].

Powers et al. is discussed above. Powers et al. teach a pharmaceutical composition in any form (inherently containing a diluent or excipient since can be in the form of e.g. tablet, aqueous or oily suspension, etc.) (col. 16, lines 23-40), comprising protease inhibitors such as Suc-Val-Pro-Phe^{P}(Oph)$_2$ (e.g. Example 17), described as the "best inhibitor for [serine proteases] chymotrypsin and chymotrysin-like enzymes" (col. 5, lines 40-44; col. 3, lines 50-53), which are involved in "tissue remodeling" [e.g. tissue adhesion formation] (col. 1, lines 41-43). However, Powers et al. does not expressly teach the use all protease inhibitors or protease inhibitors such as Suc-Val-Pro-Phe^{P}(Oph)$_2$ to reduce [tissue] adhesion formation (e.g. claim 1) or all the various forms of administration (e.g. claim 25-30, such as liposomes).

Scharpe et al. teach the use of serine protease inhibitors such as Suc-Val-Pro-Phe (para 69) in virtually any pharmaceutical admixture/formulation, such as liposomes (para 125).

Okamoto teach a pharmaceutical composition comprising protease inhibitors such as Suc-Val-Pro-Phe^{P}(Oph)$_2$, for treating tissue adhesion (entire document).

Akahoshi teach a pharmaceutical composition comprising protease inhibitors such as Suc-Val-Pro-Phe^{P}(Oph)$_2$, for treating tissue adhesion (entire document).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use any protease inhibitor, such as Suc-Val-Pro-Phe^{P}(Oph)$_2$, to reduce [tissue] adhesion formation as one of the methods relevant to inhibiting the actions of the serine protease chymotrypsin methods in Powers et al., because Scharpe et al. advantageously teaches the use of protease inhibitors such as Suc-Val-Pro-Phe^{P}(Oph)$_2$ to inhibit chymotrysin, which is a serine protease known to be used in the pathway of tissue remodeling (e.g. adhesion/ aggregation/binding), like other protease inhibitors within the family of protease inhibitors, and one of skill in the art would recognize that administering protease inhibitors such as Suc-Val-Pro-Phe^{P}(Oph)$_2$, even if not expressly stated, is administered in part or total to combat such tissue adhesion caused by chymotrypsin, as Okamoto and Akahoshi both advantageously teach.

It would have been obvious to one of ordinary skill in the art at the time of the invention to put protease inhibitors such as Suc-Val-Pro-Phe^{P}(Oph)$_2$ in any formulation/admixtures (e.g. any "transmitter" such as any carrier molecule having high molecular weight such as hyaluronic acid, hydrogel, carboxymethylcellulose, dextran, cyclodextran; e.g. Applicant's claims 9, 12-18) in the composition of Powers et al, because Scharpe et al. advantageously teach that serine protease inhibitors may be put in composition with e.g. liposomes, etc. depending on the desired result/administration route; just as Powers et al. likewise discussed in terms of motivation for route/type of administration being left open to the skilled artisan and the desired effect when using protease inhibitors.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Obvious-Type Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

The rejection of claims 1-20 as provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7, 10-12, 30, and 33 of copending Application No. 10/602,035 (Miyazaki ALONE, also with this Examiner), is maintained for the same reasons of record previously indicated. Applicant has provided no new arguments, other than to say it will be addressed once all other rejections have been overcome.

Applicant had argued the same routes are not *claimed* therein, as presently. Again, this was made under an obviousness analysis, and other routes of administering this well known product would have been readily apparent to one of ordinary skill in the art. [As for Double Patenting, the analysis turns on the claims, yet the specification remains used as guide where "comprising" language in base claims leaves open the routes of administration, and in this regard, Applicant's para 54 recites, "[e]ffective dosages, regimens, and routes of administration for other protease inhibitors may be readily determined by one of skill in the art using the teachings provided herein"]. Additionally, as cited before, although the conflicting claims are not identical, they are not patentably distinct from each other because '035 expressly claimed, though through different choice of words, the same invention/compounds/medicament, including the preferred protease inhibitors such as Suc-Val-Pro-Phe^{P}(Oph)$_2$, for the purpose of inhibiting tissue adhesion.

This remains a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAURY AUDET whose telephone number is (571)272-0960. The examiner can normally be reached on M-Th. 7AM-5:30PM (10 Hrs.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MA, 3/1/2008

/Christopher R. Tate/
Primary Examiner, Art Unit 1655